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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,870

01/12/2006

Kouji Yamashita

018773-044

2256

21839 7590 10/02/2009  
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EXAMINER

ALI, MOHAMMAD M

ART UNIT

PAPER NUMBER

3744

NOTIFICATION DATE

DELIVERY MODE

10/02/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/529,870	<b>Applicant(s)</b> YAMASHITA ET AL.	
	<b>Examiner</b> MOHAMMAD M. ALI	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13,27-29,31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-29,31 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### ***Claim Objections***

Claim 28 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The whole body of the claim 28 is disclosed in claim 27 and fails to further limit the subject matter of previous claim 27.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 27-28** are rejected under 35 U.S.C. 102(b) as being anticipated by Sanagi (EP 0926452).

**In regard to claims 27-28**, Sanagi teaches a pressure pulsation reduction equipment of refrigeration cycle equipment comprising a refrigeration cycle including a compressor (10) (see Fig. 1 and para 32) and a pressure pulsation reducer (4,5) which is installed on at least one of a high pressure side and a low pressure side of the compressor (10) (see Fig. 1), the pulsation reducer (4,5) including a flow-channel separator (5c) (col 6 lines 11-15) with a plurality of small holes (see Fig. 2) and the flow-channel separator (5c) formed open on one end

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(sides near heat exchangers 9) and in contact with a flow-channel wall (8) on another end (see Fig. 1).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 31-32 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Sanagi (EP 0926452).

**In regard to claims 31**, Sanagi teaches a pressure pulsation reducer (4,5) on a compressor (see Fig. 1) with a plurality of small holes (see Fig. 2), but do not explicitly teach that the holes have a diameter up to 10mm or that teach the pressure pulsation reduction equipment of refrigerant cycle equipment wherein a diameter of each small hole of the plurality of small holes is up to 10mm or that the plurality of small holes is up to 10% where the open area ratio is a ratio of a total cross-sectional area of the plurality of small holes.

Claims 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiwara et al (JP 11-107959 A). Fujiwara et al disclose a pressure pulsation reduction equipment of refrigeration cycle equipment, comprising:

a refrigeration cycle including a compressor (1), which is connected to a pipe (43) that is a flow-channel; and a pressure pulsation reducer pipe (35) which is installed on at

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least one of high pressure side and a low pressure side of the compressor (1) , see Fig 1; (This pressure pulsation device can be more than one and can be placed at any desired place, see Para [0021] of the machine translation enclosed) of the compressor (1), the pressure pulsation reducer pipe (35) including a flow-channel separator (39) which separates the flow channel flow channel of the pipe (35) into at least a first flow channel by first hole and a second flow channel by a second hole with the pipe (35) having a plurality of small holes (41, see Fig. 1) formed open on one end and in contact with a flow-channel wall (3) in the pipe on another end. See Fig. 1 and the enclosed translation ; the channel separator is formed open on one end and in contact with a flow channel wall of pipe 35 on another end. See Fig. 1

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29,31and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al.

Regarding claim 29, Fujiwara et al disclose pressure pulsation reducer including oil separation as seen lubricating oil 45 is being separated while pressure pulsation is being done by pressure pulsation device with end plate (39). Therefore, it indicates that pressure pulsation device can be placed in a lubrication separator as a separator and pressure pulsation means. Again placing a pressure pulsation device either at a

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discharge side of a compressor or suction side of a compressor or in a oil separator is nothing but rearranging part of an invention. Since it has been held that rearranging parts of an invention involves only routine skill in the art. (See *In re Japikse*, 86USPQ 70).

Regarding claim 31, Fujiwara et al disclose the pulsation device with small holes (41 see abstract). It indicates the holes needed for the purpose of pulsation reduction should be small enough to perform the pulsation reduction efficiently. Although, Fujiwara et al do not disclose a specific hole size like 10mm, an ordinary skill of art when taught by Fujiwara et al that small holes are needed to perform pulsation reduction, it is obvious that the ordinary skill of art is equally able to select a suitable hole size including 10mm hole size.

Regarding claim 32, Fujiwara et al disclose the pulsation device with small holes (41 see abstract). It indicates the holes needed for the purpose of pulsation reduction should be small enough and the holes should not be distributed all over the discharge or suction pipe of the compressor to efficiently perform the pulsation reduction operation. Although, Fujiwara et al do not disclose a specific open area ratio of plurality of small holes, an ordinary skill of art when taught by Fujiwara et al that small holes are needed to perform pulsation reduction is distributed to a very small portion of the discharge pipe, it is obvious that the ordinary skill of art is equally able to select a suitable hole size including a specific open area ratio of the plurality of small holes is up to 10% where the open area is a ratio of total cross-sectional area of the plurality of small holes to an area of the flow channel wall.

### ***Response to Arguments***

Applicant's arguments filed 07/17/09 have been fully considered but they are not persuasive. The applicants argue that Sanagi reference does not disclose a compressor connected to a pipe that is flow channel. The Applicants continue to assert that shroud 5c as well as other portions that make up the centrifugal fan is never contact with the flow channel wall formed by the cylindrical bell portion 8 as well as casing 2. The Examiner disagrees. The shroud 8 is not a full part of the flow channel. Shroud 5 forms a continuation shroud part of shroud 8 as well as the continuation part of the flow channel and flow channel separator 5c is in contact with the flow channel formed by the shroud 5. Therefore, the above argument of the Applicants is not true. The applicants further argue that Fujiwara does not disclose a flow channel into at least a first flow channel and a second flow channel. The Examiner disagrees.

Fujiwara discloses a separator (39) which separates the flow channel flow channel of the pipe (35) into at least a first flow channel by first hole and a second flow channel by a second hole with the pipe (35) having a plurality of small holes (41, see Fig. 1) formed open on one end and in contact with a flow-channel wall (3) in the pipe on another end. See Fig.. The Applicants further continue to argue that small holes forming the first flow channel and the nozzle forming the second flow channel are not being disclosed by Fujiwara. The Examiner disagrees. Fujiwara discloses small holes (41) as the first flow channel and the nozzle exit mouth of the pipe 35 forms the second

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flow channel. Therefore, the above arguments of the Applicants are also not correct.

Therefore, the rejections are ok.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD M. ALI whose telephone number is (571)272-4806. The examiner can normally be reached on maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammad M Ali/  
Primary Examiner, Art Unit 3744